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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,124	09/26/2000	Wai-Chung Chan	PD-200126	5665

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Patent Docket Administration
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EXAMINER

DUONG, THOMAS

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/670,124

Applicant(s)

CHAN ET AL.

Examiner

Thomas Duong

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on January 23, 2004 (Paper No. 3). The amendment filed on January 23, 2004 has been entered and made of record. The original application contained *claims 1-38*. In the amendment filed on January 23, 2004, the Applicants added *claim 39* and amended *claim 28*. There are *no claims* allowed. Hence, *claims 1-39* are presented for further consideration and examination.

Response to Argument

2. Applicant's arguments, see pg.8, line 17 – pg.9, line 6, filed January 23, 2004, with respect to *claims 1, 11, 21 and 29* have been fully considered and are persuasive. The previous rejection has been withdrawn.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. *Claims 1-39* are rejected under 35 U.S.C. 102(b) as being anticipated by Zheng et al. (US005392280A).

5. With regard to claims 1, 11, 21 and 29, Zheng reference discloses,
- *retrieving a search order table having a plurality of table entries corresponding to M queues that selectively store the packets, the table entries storing values that correspond to relative positions of the M queues and that are selected based upon a transmission constraint of the communication system; and (Zheng, abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.4, lines 11-17; col.5, lines 18-20, lines 46-66; col.14, lines 25-36; fig.1; fig.16)*
 - *scheduling transmission of the packets stored in the M queues based upon the search order table. (Zheng, abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.4, lines 11-17; col.5, lines 46-66; col.6, lines 26-46; fig.1; fig.16)*
6. With regard to claims 2, 12 and 30, Zheng reference discloses,
- *wherein the transmission constraint in the retrieving step specifies that the packets are to be transmitted to a plurality of destination nodes that are non-interfering, the communication system being a satellite communication system. (Zheng, col.5, lines 18-20; col.15, lines 50-68; fig.18)*
7. With regard to claims 3, 13, 22 and 31, Zheng reference discloses,
- *transmitting the packets via N number of transmitters, wherein N is less than or equal to M . (Zheng, abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.4, lines 11-17; col.5, lines 18-20, lines 46-66; col.14, lines 25-36; fig.1; fig.8; fig.16)*
8. With regard to claims 4-6, 14-16, 23-24 and 32-34, Zheng reference discloses,
- *(a) checking whether a particular one of the M queues has a packet stored therein and satisfies the transmission constraint; (Zheng, abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.5, lines 46-66; col.6, lines 26-62; fig.1; fig.16)*

- *(b) selectively including the particular queue in a transmission list based upon the checking step; and (Zheng, abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.5, lines 46-66; col.6, lines 26-62; fig.1; fig.16)*
 - *(c) iteratively performing steps (a) and (b) until at least one of each of the M queues is checked and N number of the queues are included in the transmission list. (Zheng, abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.5, lines 46-66; col.6, lines 26-62; fig.1; fig.16)*
9. With regard to claims 7-8, 17-18, 25-26 and 35-36, Zheng reference discloses the invention substantially as claimed,
- See *claims 5, 15, 23 and 33* rejection as detailed above.
- Furthermore, Zheng reference discloses,
- *wherein the search order table in the retrieving step has L consecutive table entries associated with L queues that satisfy another transmission constraint. (Zheng, abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.5, lines 46-66; col.6, lines 26-62; fig.1; fig.16)*
 - *wherein the transmission constraint in the retrieving step specifies that the packets are to be transmitted to a plurality of destination nodes that are non-interfering, and the other transmission constraint specifies that only one of the destination nodes selectively requires high-powered transmission. (Zheng, abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.4, lines 11-17; col.5, lines 18-20, lines 46-66; col.14, lines 25-36; fig.1; fig.16)*
10. With regard to claims 9-10, 19-20, 27-28 and 37-38, Zheng reference discloses,
- *inputting repetitive table entry values in the search order table based upon relative traffic load associated with a plurality of destination nodes. (Zheng,*

abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.4, lines 11-17; col.5, lines 18-20, lines 46-66; col.14, lines 25-36; fig.1; fig.16)

- *generating a plurality of search order tables based upon a plurality of power constraints associated with the communication system; storing the plurality of search order tables; and selecting a particular one of the plurality of search order tables.* (Zheng, abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.4, lines 11-17; col.5, lines 18-20, lines 46-66; col.14, lines 25-36; fig.1; fig.16)

11. With regard to claim 39, Zheng reference discloses,

- *scheduling transmission of the packets stored in a plurality of queues based upon a search order table, wherein the search order table has a plurality of table entries corresponding to the queues, the table entries storing values that correspond to relative positions of the queues; and* (Zheng, abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.4, lines 11-17; col.5, lines 46-66; col.6, lines 26-46; fig.1; fig.16)
- *transmitting the packets to the nodes over one or more satellite links, wherein the stored values in the table are determined according to a transmission constraint relating to the nodes.* (Zheng, abstract; col.1, lines 8-12; col.3, line 26 – col.4, line 4; col.4, lines 11-17; col.5, lines 18-20, lines 46-66; col.14, lines 25-36; fig.1; fig.16)

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to Applicants' disclosure:

- Pei et al. (US006272109B1)

- Sriram (US005463620A)
- Varma et al. (US005959993A)
- Hou et al. (US006324184B1)
- Sriram (US004914650)
- Ofek (US006377579B1)


13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Thomas Duong whose telephone number is 703/305-1886. The Examiner can normally be reached on M-F 7:30AM - 4:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, David A Wiley can be reached on 703/308-5221. The fax phone numbers for the organization where this application or proceeding is assigned are 703/872-9306 for regular communications and 703/872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703/305-3900.

Thomas Duong (AU2143)

March 30, 2004



BUNJIB JAROENCHONWANIT
PRIMARY EXAMINER